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Turkey

Sugar Semi-annual

2013 Sugar Semi-annual

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Report Highlights:

Production quotas for both beet sugar and starch based sugar were unchanged at 2,288,000 MT and 244,000 MT respectively for the past three marketing years (MY), but the beet sugar quota is reduced to 2,266,000 MT for 2013/2014 MY. In response to lower quotas, the plantation area decreased from 2.9 to 2.8 million decars and sugar beet production decreased from 16 to 15 million MT in MY 2012/13. Consequently, total centrifugal sugar production decreased to 2,128,319 MT compared to 2,262,000 MT last year.

Executive Summary:

In MY2012/2013 climate conditions were in favor of sugar beets and this led to a higher polarity rate (amount of sugar obtained from the sugar beet) compared to last year. The average polarity rate throughout Turkey was 17.4% in MY 2012/13. Average sugar beet yield has been 5.5 tons per hectare.

In the Konya region in Central Anatolia - the capital of Turkish sugar beet production - yield rate has been 34.3% greater than Turkey's average, which means 7.4 tons/hectare. As farmers become more familiar with modern agriculture techniques and are using better quality seeds, the yields are increasing and so are farmers' incomes.

The beet purchase price increased 8% from 125 TL/MT last marketing year to 135 TL/MT this year.

However input costs such as fuel, electricity, fertilizer and labor increased an average of 25% over the same period of time. Regions that enjoy higher yields may have closed this gap, but hurt farmers in those regions where the yields are lower.

In MY 2012/13 nearly 15 million MT of sugar beets were harvested from an area of 280 thousand hectares (1 hectare=0.4 acres). From this 2 million metric tons (MMT) of sugar were produced. Sugar is sold for 115 Turkish Lira (TL) (\$64) in 50 kg bags, and cube sugar is sold in 20 kg packs for 58 TL (\$32).

Commodities:

Sugar, Centrifugal

Production:

Sugar is produced from sugar beets in Turkey due to climatic conditions, as in most of Europe. Sugar beets prefer climates where the days are warm and the nights are cold. In this respect, sugar beets are grown mostly in the Central Anatolia Region, namely in Ankara, Konya, Eskisehir, Afyon, Tokat and Yozgat cities, and are planted in rotation with cereals, pulses, fodder crops and sunflowers. Sugar beets are planted in the spring, around April, and are harvested around October, the time varying according to climate conditions of the region.

Production of sugar beets, and consequently sugar, is limited to quotas specified by the Sugar Board.

The Sugar Board regulates domestic production through annual production quotas for sugar beet and starch based sugar. These quotas are categorized under three groups. The 'A' quota specifies how much sugar (from both corn and sugar beets) companies can sell in Turkey within a marketing year. The 'B' quota is an extra amount that is produced and kept in reserve as a buffer, and its volume is calculated as a percentage (generally 4%) of the A quota. The 'B' quota is allocated only for beet sugar.

The quota is allocated to each of the sugar producing facilities at the beginning of each year. These factories then contract farmers based on their allocated quotas. Any excess sugar produced at the end of a marketing year is purchased from the farmers by factories at world prices, and it is allocated for exports. This is called the 'C' sugar, and it is either exported at world prices or used in export confectionary products. There is no quota announced for C sugar since it can only be used in products that will be exported, and cannot be marketed domestically.

	2010/2011 MY			2011/2012 MY			2012/2013 MY			2013/2014 MY		
	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL
Beet Sugar	2 200	88	2 288	2 200	88	2 288	2 200	88	2 288	2200	66	2266
Starch Based Sugar	244	-	244	244	-	244	244	-	244	244	-	244
Total Quota	2 444	88	2 532	2 444	88	2 532	2 444	88	2 532	2444	-	2510

1,000 metric tons, 'MY' indicates 'Marketing Year'

There are 7 beet sugar producers in the Turkish sugar sector, 6 of which are private and one public (Turkseker) producers that is subject to privatization. These 7 producers have 33 factories with a total production capacity of 3.1 million MT per year. There are also 5 starch based sugar (SBS) producers, all of which are privately owned and have a total capacity of 888 thousand metric tons of corn. The total sugar production quota of 4,137,000 tons is allocated to these 12 companies; 3,147 thousand to beet sugar, and 900 thousand tons to SBS.

The table below shows the allocation of Beet Sugar Production Quotas to the existing 7 producers. The quota distributed to these companies is based on their performance during the previous three years.

2013/2014 MY ALLOCATION OF QUOTAS TO BEET SUGAR PRODUCERS (Tons)			
Beet Sugar Producers	A Quota	B Quota	Total
Türkiye Şeker Fabrikaları A.Ş.	1,230,500	36,910	1,267,410
Konya Şeker Fabrikası A.Ş.	435,500	13,070	448,570
Amasya Şeker Fabrikası A.Ş.	62,100	1,860	63,960
Kayseri Şeker Fabrikası A.Ş.	306,200	9,190	315,390
Keskinkılıç Gıda San. ve Tic. A.Ş.	103,000	3,090	106,090
Adapazarı Şeker Fabrikası A.Ş.	31,000	930	31,930
Kütahya Şeker Fabrikası A.Ş.	31,700	950	32,650
Total	2,200,000	66,000	2,266,000

From the above list, Türkiye Şeker Fabrikaları A.Ş., otherwise known as TURKSEKER, is a public entity being privatized. Konya, Amasya and Kayseri Sugar Factories are grouped under the beet planters cooperative called PANKOBIRLIK, and Keskinkilic is privately owned. Formerly owned by the state, Kutahya Sugar Factory was sold to a private firm (Torunlar Gıda San. ve Tic. A.Ş.) and Adapazarı Sugar Factory was sold to the Adapazarı Sugar beet Planters Cooperative in 2004.

There are 33 sugar plants and 6 SBS plants in total. 25 of the plants marked are the public beet sugar production factories that belong to TURKSEKER; 8 are private beet sugar production factories and the 6 are starch based sugar production plants that are all private.

Sugar Beet Production and Prices

In MY 2012/2013, the area planted decreased from 2,938,411 square meters to 2,801,858 square meters due to the unchanged production quotas and increasing yields, and since the quotas decreased for MY 2012/2014, post expects the plantation area to shrink further. A total of 14,919,941 MT sugar beets were harvested and 2,128,319 MT of sugar was produced.

The production system is as follows:

The Sugar Board announces the quotas for the Market Year and allocates them to the existing factories.

Factories contract farmers in their vicinity per their allocated production quota and a set procurement price.

Farmers plant their beets around April and harvest them around September.

The predefined amount of beets agreed upon by the farmer and the factory is purchased by the factory at the A-quota price and any excess amount is purchased at the C-quota price.

The Turkish government uses sugar production to meet national social priorities. Being a labor-intensive commodity, sugar beets act as a means of reducing farmer migration to big cities. In this respect, many of the state-owned factories were opened in areas with high unemployment rates, and these plants continue to operate under through government support despite operating poorly.

Annual sugar beet production and average yields for the past five years are given at the table below.

TURKEY SUGAR BEET PLANTATION, PRODUCTION & YIELDS AND BEET PRICES				
Years	Planted Area (m²)	Beets Produced [Paid For] (Metric Tons)	Average Yield (MT/Da [1000m²])	Beet Prices with 16% Sugar Content [Polarity] (TL/MT)
2008	3,207,307	15,488,332	4.83	110
2009	3,239,704	17,274,674	5.33	115
2010	3,286,513	17,946,239	5.46	118
2011	2,938,411	16,126,489	5.49	126
2012	2,801,858	14,919,941	5.33	137
2013 (Exp.)	2,800,000	15,000,000	5,40	147

As can be observed from the table above, yields are increasing each year due to the use of modern agricultural techniques, especially in irrigation. The use of modern seeds also plays an important role in this increase. The average yield per 1,000 sqm increased from over 3 thousand tons in the 90's to around 4.5 thousand tons after 2000. In the last three years this figure has exceeded 5 thousand tons and reached nearly 5.5 thousand tons in 2011.

Centrifugal Sugar Prices

The government had supported the sugar sector with high procurement prices in the past (before the enactment of the Sugar Law), while the price is now determined by the consensus of sugar factories and producers (or their representatives) before planting. Although the announced official prices may be higher, companies carry out credit sales and discounts throughout the market year to eliminate their stocks. Currently, granulated sugar in 50 kg bags is sold for 115 TL compared to 106.38 TL in 2012, and cube sugar is sold in 20 kg packs for 58 TL.

Starch Based Sugar (SBS)

The 'Raw Material and Sugar Prices Decree (2009) requires the use of domestically grown corn for the production of SBS that is marketed domestically. There are currently 5 SBS companies that are allocated a quota and their total production capacity is approximately 1 MMT/year. These companies are all private and have 6 plants. Apart from these, there are 3 other SBS companies that are not allocated quotas and produce sugar based starch for export purposes only. These have a total SBS production capacity of 146,000 MT/year.

As per the Sugar Law, only 'A' quotas are allocated for Starch Based sugar (no 'B' quotas). However, the initial quotas specified for SBS can be increased up to 50% by Cabinet decree, and the Cabinet exercised this right in MY 2009/2010 and MY 2010/2011. The table below shows the distribution of the Starch Based Sugar Quota among the 5 SBS producer companies.

2012/2013 MARKETING YEAR SBS QUOTAS (Tons)		
Starch Based Sugar Producers	A Quota	Capacity
CARGILL TARIM VE GIDA SANAYİ VE TİCARET A.Ş.	107,039	400
AMYLUM NİŞASTA SANAYİ VE TİCARET A.Ş.	76,091	250
PNS PENDİK NİŞASTA SANAYİ A.Ş.	34,825	110
TAT NİŞASTA İNŞAAT SANAYİ VE TİCARET A.Ş.	15,698	70
SUNAR MISIR ENT. TES. SANAYİ VE TİCARET A.Ş.	10,747	55
Total	244,400	885

Prices

The Turkish Grain Board's (TMO) corn purchasing price increased from 0.49 TL/kg in 2010 to 0.54 TL/kg in 2011, and to 0.59TL/kg in 2012. In CY 2011, 939,000 MT of corn was used by SBS producers for starch production and export SBS volumes. These SBS producers also produce starch, and the amount of corn listed includes both export SBS and starch.

Starch based sugar prices (weighted average) since MY 2002/2003, when the Sugar Law first came into effect, are given below.

Marketing Years	SBS Prices (TL/kg)	Change %
2002/03	0.78	-
2003/04	0.91	16.67
2004/05	0.97	6.59
2005/06	0.93	-4.12
2006/07	0.94	1.08
2007/08	1.03	9.57
2008/09	1.15	11.65
2009/10	1.17	1.74
2010/11	1.26	7.69
2011/12	1,37	8.73
2012/13*	1,41	2.91

* As of February 2013

Molasses

Sugar beets are used not only as a raw material for the sugar industry, but are also an important feed ingredient for the livestock industry. Sugar factories produce molasses and sugar beet pulp as a side product and this pulp is used either directly or as a mixture with molasses in the feed sector. Naturally, production of these side products are increasing parallel to the amount of beets produced for the factories.

Other than feed, molasses is also used in a variety of sectors such as medicine, cosmetics, construction, alcoholic beverages and yeast. Annual molasses production does not vary vastly from year to year and is around 670 tons. The price of molasses varies according to its place of production and sales. For instance the price per metric ton of molasses from the 1st region (Afyon, Alpullu, Eskisehir, Susurluk and Usak factories) is 344 TL whereas it is 273 TL/MT for that from the 4th region (Ağrı, Bor, Erciş, Ereğli, Kars, Kırşehir, Muş, Yozgat factories) in 2012.

Ethanol

Another side product obtained from the processing of sugar beets is ethanol. Ethanol is obtained from plants that contain starch and glucose such as corn, sugar beets, wheat, etc. Currently sugar beets are the main source of bio-ethanol production in Turkey, followed by corn and wheat.

The Energy Market Regulatory Authority (EPDK) published a draft communiqué September 27, 2011, that obligates the mixture of 2% bio-ethanol into the gasoline sold in Turkey starting from January 1,

2013. Since 2006, distributors have had the option of mixing up to 2% bio-ethanol into fuel, and those who did benefited from a 2% exemption from Special Consumption Tax, but this had been voluntary. The same law calls for a further increase in this figure to become 3% in 2014. The law requires that bio-ethanol be obtained from domestically grown agricultural products. The law also puts forth similar figures for biodiesel blending in the diesel fuel starting from year 2014. The relative mixture proportions for biodiesel and bio-ethanol are given in the below table.

	2013	2014	2015	2016
Bio-ethanol	2%	3%	3%	3%
Biodiesel	-	1%	2%	3%

The EPDK data show that Turkey consumes 2.7 billion liters of gasoline and 16.3 billion liters of diesel fuel annually. Based on these figures, when 2% bio-ethanol starts to be mixed into all the marketed gas, 54 million liters of bio-ethanol will be used in the year 2013, and at 1% mixture rate, 163 million liters of biodiesel will be used in the year 2014.

There are four bio-ethanol plants in Turkey.

Name of Plant/Company	Raw Material Used	Production Capacity (annual)
Konya Şeker – Cumra Plant	Sugar beet syrup and molasses	84,000 m3
Tezkim Agr. Chem.	Corn and wheat	30,000 m3
Tarkim Agr. Chem	Corn and wheat	18,000 m3
Turk Seker - Eskisehir Plant	Sugar beet molasses	12,000 m3

In the light of the established bio-ethanol production capacity of Turkey, it is foreseen that out of this 54 million liters of bio-ethanol; 34 million liters will be produced from sugar beets, 10 million liters will be produced from corn, and 10 million liters will be produced from wheat. This will call for an additional production of 540,000 tons of sugar beets. In order to accommodate this need, 13,355 hectares will be used for energy agriculture. Starting from 2014, when 3% mixture rate will be applicable, 80 million liters of bio-ethanol will need to be produced and this will necessitate an additional production of 800 thousand tons of sugar beets. Even though the government has not yet made a nation-wide plan to address this need, individual producers are planning their plantings accordingly for MY 2012/2013.

54 million liters of bio-ethanol mixture will displace 330,000 cubic meters of gasoline and this will mean a US\$203.4 million reduction in oil imports. Extra production will mean employment for over 3,000 people, which will contribute another \$387.4 million to the economy. There will also be an increase of 106,800 tons of high-protein feed which will be worth over \$30 million.

Biodiesel on the other hand is obtained from oil seeds and Turkey is already a net importer of oil seeds. Therefore, in the absence of a national bio-fuel program or an action plan, the industry welcomes the mandatory mixture rates for bio-ethanol, but rejects those in biodiesel claiming that it would increase imports drastically.

Consumption:

Turkey is the world's fifth largest beet sugar producer, ranking behind France, Germany, the United States, and Russia. With a population approaching 75 million, Turkey is also a significant consumer. Annual consumption is around 2.3 million metric tons (MMT). Increasing urbanization rates and the subsequent changes to lifestyles and eating habits play an important role in increasing sugar consumption. This reflects in the increase of SBS imports.

Starch Based sugar that is derived from corn is not directly consumed but is rather used as an ingredient in the production of candies, baked products, traditional deserts, ice cream, halva, jams, and alcoholic and non-alcoholic beverages.

Trade:

Export Trade Matrix

	2011	2012
Exports to:		
United States	21	34
Azerbaijan	4,834	4,602
Iraq	49,770	16,804
Syria	15,572	4,200
Israel	60	0
Turkish Rep.of North Cyprus	2,464	2,092
Lebanon	147	118
Somalia		4,500
Others not listed	1,226	970
Grand Total	74,094	33,320

Import Trade Matrix

	2011	2012
Imports from:		
United States	0	0
United Kingdom	2,736	2,295
France	1,711	2,994
Germany	201	219

Libya	24	0
Belgium	0	2
Saudi Arabia	5	0
Algeria	0	1
Grand Total	4,677	5,511

Source: Global Trade Atlas

Commodity: 170199, Beet Sugar and Chemically Pure Sucrose, Refined, In Solid Form, Not Containing Added Flavoring or Coloring Matter - Annual

Stocks:

Any remaining stocks at the end of a marketing year mostly belong to Türkiye Seker Fabrikalari A.S and are kept at the factory silos, since the private companies have more flexible marketing policies (discounts and credit sales) and they usually try to sell everything they produce following the end of a production period.

Producers who are allocated quotas at the beginning of the marketing year sell their production in the domestic market. If a company cannot market all of its allocated amount of 'A' quota sugar, the remaining amount is transferred to the 'A'-quota of the following marketing year and hence the company's quota for the following year is reduced. Should the company prefer, this excess amount can be transferred to 'C' sugar and be exported. In any case, the companies have to preserve their security reserves (B quota).

Stocks are decreasing every year due to unchanged production quotas and this reflects negatively in export figures. With the reduction of quotas announced for next year, Post forecasts stocks to fall below 100,000 MT by the end of MY 2013/2014.

Starch Based sugar companies usually produce and sell their entire allocated quota and are left with no more than 10-15 thousand tons of stocks at the end of the marketing year.

Policy:

The government is in the process of making a substantial change in its sugar policy. In this respect a new Sugar Law containing 27 clauses that will replace the current law (Nr. 4634) was sent to Parliament for approval on April 8, 2013. The proposed law would dissolve the Sugar Board and establish a Sugar Sector Regulation and Auditing Board. The new Board will be entitled to determine quotas, allocate these quotas, and regulate issues such as new factory establishments, capacity increases.

The law changes the definition of sugar to: "all sorts of sugar varieties including raw sugar, brown sugar, side white sugar, white sugar, refined sugar, sugar solution, invert sugar solution, invert sugar syrup, glucose syrup, glucose-fructose syrup, dried glucose syrup, dextrose, dextrose monohydrate, water-free dextrose, fructose syrup, fructose-glucose syrup, and crystal fructose, which include sucrose, glucose, fructose or their polymers such as starch or inuline as raw materials.

Another important change of the proposed legislation is the increase in SBS Quota from the current 10% to 15% of the 'A' quota domestic beet sugar. Currently the Cabinet of Ministers has the right to increase or decrease this amount by 50% (which creates a range of between 5% to 15% , but the new

law forfeits the Cabinet's right to decrease this quota. The scope of this 15% allowance is also expanded to include sucrose based sugars as well. The Cabinet will be able to increase this quota without limitation if there is a need in a given Marketing Year.

The law excludes sugar that will be used for non-food purposes from the announced quota regime. Therefore sugar that will be used as raw material in industries such as chemistry, medicine, fermentation, construction, paper and bio-fuels will not be subject to a quota limit; however, production and sale of these sugars will require a license from the new Board.

The law calls for privatization efforts to continue, but the latest bids were cancelled by the order of the Prime Minister.

Marketing:

The market year begins after the harvest and lasts until the next autumn (i.e. from September 1 to August 31 of the following year). Despite its 4-5 month production period that starts generally around September and ends in January, sugar is marketed for 12 months. The state-owned Turkish Sugar Corporation, private producers, wholesalers and retailers handle the marketing of sugar.

The sweets and confectionary sectors in Turkey are undergoing changes. Production of chocolate and cacao products increased substantially compared to the traditional Turkish products such as Turkish delight and halva. The sector is also increasingly using SBS instead of beet-sugar.

In 2012, exports of beet sugar decreased considerably due to unchanged quotas for the past 3 years and increasing domestic consumption.

Turkey levies a 135% import tax for sugar, but there is no such limitation for the imports of non-sugar sweeteners. Despite annual fluctuations, registered sugar imports are negligible (less than 5 thousand metric tons) and are limited to specialty sugar that is not domestically produced (medical, laboratory use, etc.). Turkey has reduced smuggling in recent years due to increased controls and preventive measures taken by the Sugar Board. Registered beet sugar and SBS imports for the past decade are compared below.

SUGAR IMPORTS (Thousand MT)		
Years	Beet Sugar	Starch Based Sugar
2000	2.4	8.2
2001	0.6	12.7
2002	1.2	23.6
2003	0.7	51.7
2004	0.6	35.0
2005	3.9	38.5
2006	7.4	30.6

2007	4.2	11.6
2008	4.3	21.6
2009	4.3	8.2
2010	4.2	8.8
2011	4.7	11
2012	5.5	11

Source: TÜİK

Production, Supply and Demand Data Statistics:

Production, Supply and Demand Data Statistics

Sugar Beets Turkey	2011/2012		2012/2013		2013/2014	
	Market Year Begin: Oct 2011		Market Year Begin: Oct 2012		Market Year Begin: Oct 2013	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted		300		290		280
Area Harvested		293		279		279
Production		16,000		15,000		15,000
Total Supply		16,000		15,000		15,000
Utilization for Sugar		16,000		15,000		15,000
Utilization for Alcohol		0		0		0
Total Distribution		16,000		15,000		15,000
1000 HA, 1000 MT						

Sugar, Centrifugal Turkey	2011/2012		2012/2013		2013/2014	
	Market Year Begin: Sep 2011		Market Year Begin: Sep 2012		Market Year Begin: Sep 2012	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	327	462		355		155
Beet Sugar Production	2,300	2,262		2,128		2,200

